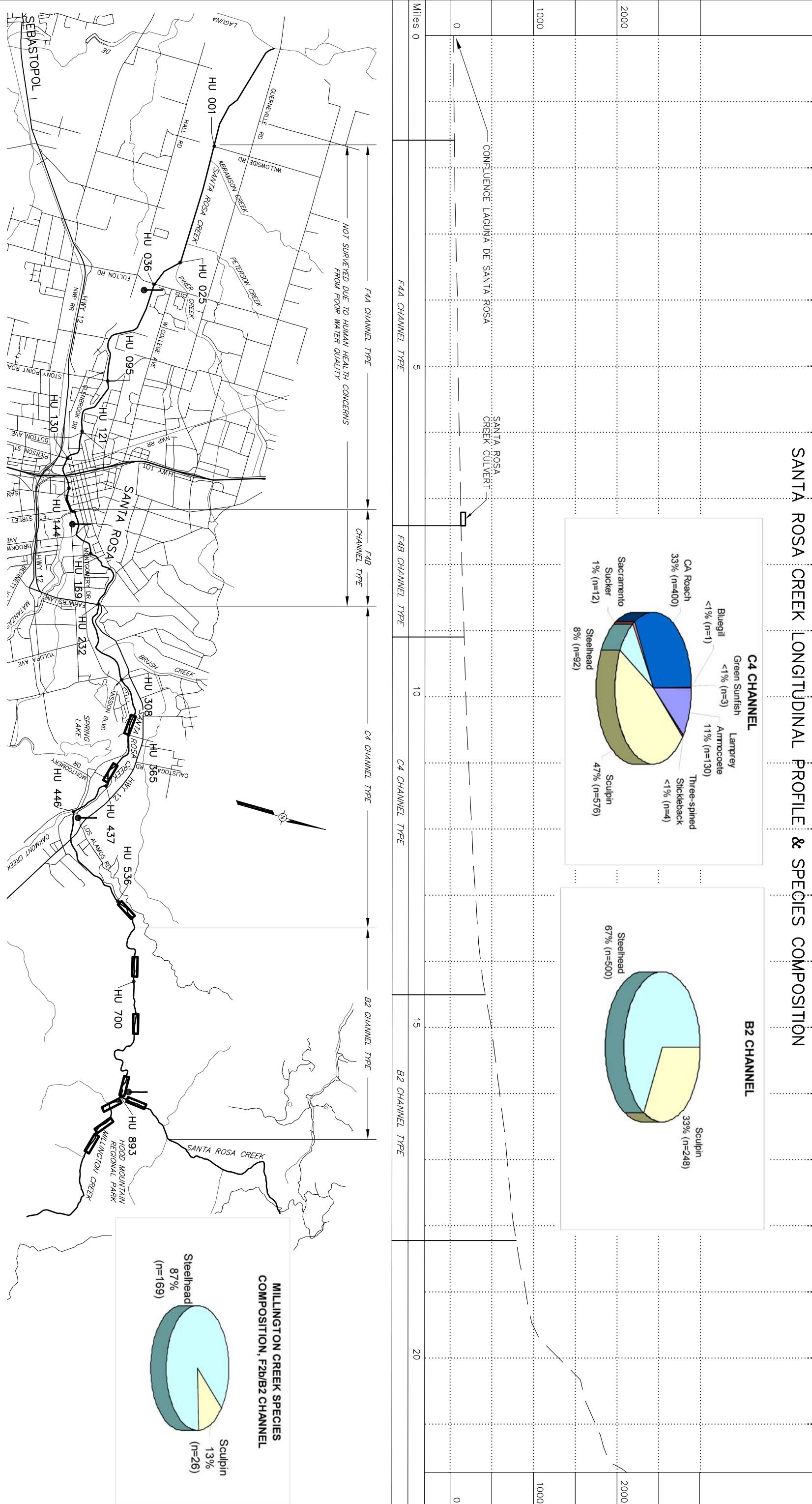


SPECIES COMPOSITION AND STUDY LOCATION,  
SANTA ROSA AND MILLINGTON CREEKS, 2000



SPECIES COMPOSITION AND STUDY LOCATION,  
SANTA ROSA AND MILLINGTON CREEKS, 2001

# MARK WEST CREEK LONGITUDINAL PROFILE & SPECIES COMPOSITION

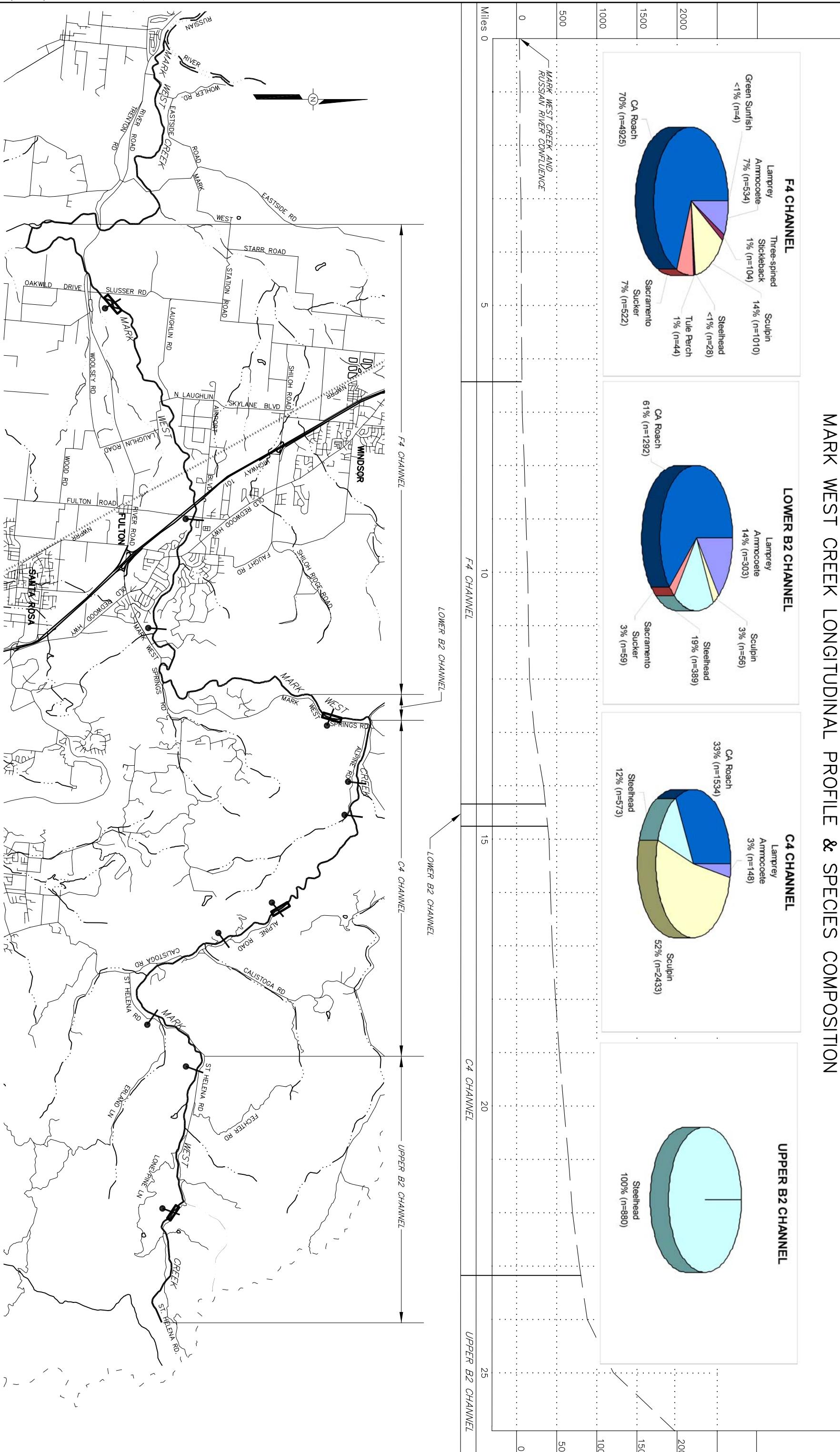


FIGURE I-4  
SPECIES COMPOSITION AND STUDY LOCATION,  
MARK WEST CREEK, 2000

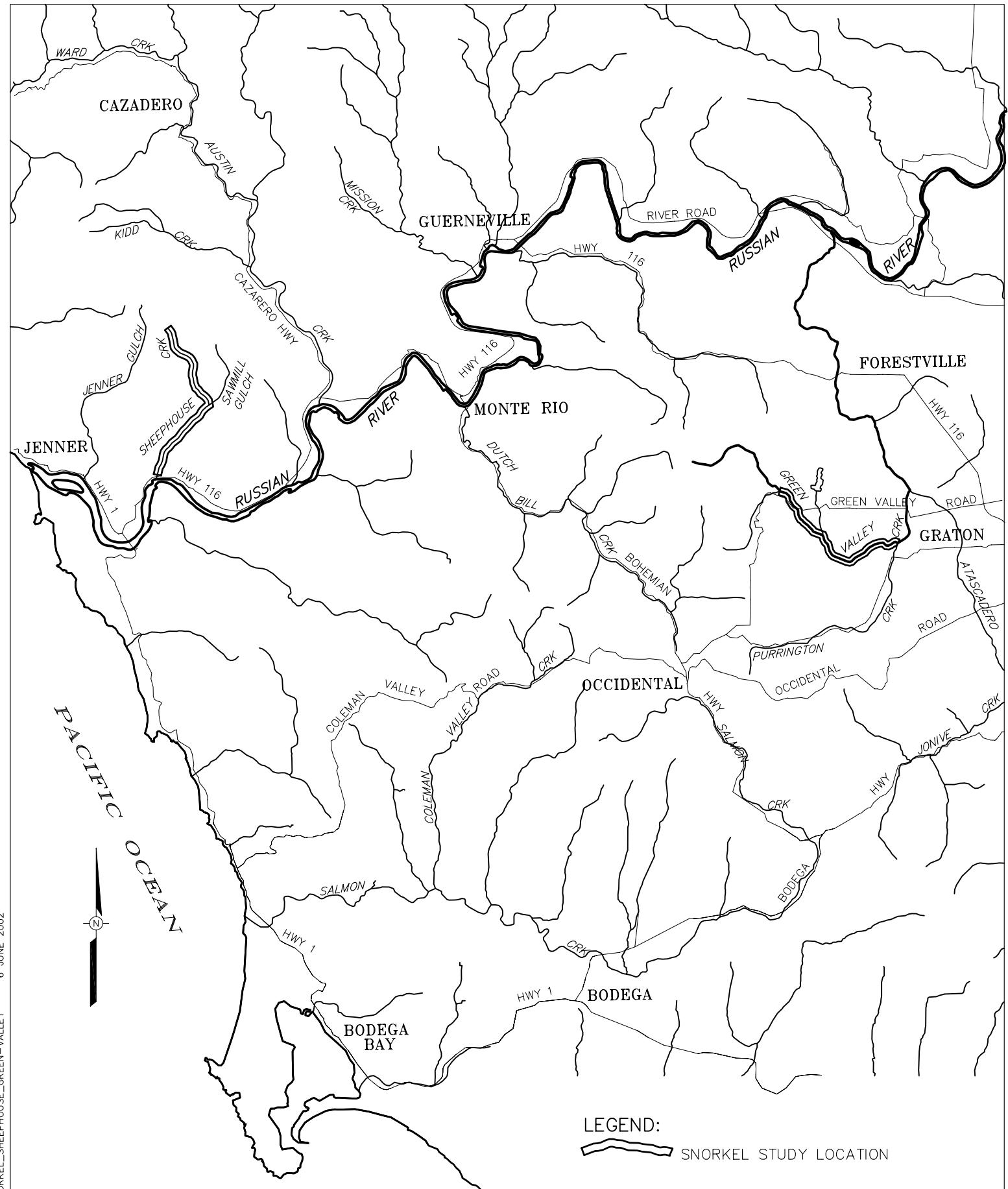


FIGURE I-5  
SNORKEL STUDY LOCATIONS SHEEPHOUSE &  
GREEN VALLEY CREEKS 2000-01

## II. POPULATION ESTIMATE AND FISH DENSITY

### **ALL CREEKS**

Table II-1: Steelhead Population Estimate Summary for Santa Rosa, Millington, and Mark West Creeks, 1999-2001

### **SANTA ROSA CREEK**

#### **F4 Channel**

- Figure II-1: Population estimate for young-of-the-year steelhead, averaged by habitat type, Santa Rosa Creek, F4 Channel, 1999-2000.
- Figure II-2: Average number of captured steelhead aged 1-3+, averaged by habitat type, Santa Rosa, F4 Channel, 1999-2000.
- Figure II-3: Average density of young-of-the-year steelhead, Santa Rosa Creek, F4 Channel, 1999-2000.

#### **C4 Channel**

- Figure II-4: Population estimate for young-of-the-year steelhead, averaged by habitat type, Santa Rosa Creek, C4 Channel, 1999-2001.
- Figure II-5: Average number of captured steelhead aged 1-3+, averaged by habitat type, Santa Rosa Creek, C4 Channel, 1999-2001.
- Figure II-6: Average density of young-of-the-year steelhead, Santa Rosa Creek, C4 Channel, 1999-2001.
- Figure II-7: Average density of 1-3+ aged steelhead, Santa Rosa Creek, C4 Channel, 1999-2001.

#### **B2 Channel**

- Figure II-8: Population estimate for young-of-the-year steelhead, averaged by habitat type, Santa Rosa Creek, B2 Channel, 1999-2001.
- Figure II-9: Average number of captured steelhead aged 1-3+, averaged by habitat type Santa Rosa, B2 Channel, 1999-2001.
- Figure II-10: Average density of young-of-the-year steelhead, Santa Rosa Creek, B2 Channel, 1999-2001.
- Figure II-11: Average density of 1-3+ aged steelhead, Santa Rosa Creek, B2 Channel, 1999-2001.

### **MILLINGTON CREEK**

#### **F2b/B2 Channel**

- Figure II-12: Population estimate for young-of-the-year steelhead, averaged by habitat type, Millington Creek, 1999-2001.
- Figure II-13: Average number of captured steelhead aged 1-3+, averaged by habitat type, Millington Creek, 1999-2001.
- Figure II-14: Average density of young-of-the-year steelhead, Millington Creek 1999-2001.
- Figure II-15: Average density of 1-3+ aged steelhead, Millington Creek 1999-2001.

## **MARK WEST CREEK**

### **F4 Channel**

- Figure II-16: Population estimate for young-of-the-year steelhead, averaged by habitat type, Mark West Creek, F4 Channel, 2000.
- Figure II-17: Average number of captured steelhead aged 1-3+, averaged by habitat type, Mark West Creek, F4 Channel, 2000.
- Figure II-18: Average density of young-of-the-year steelhead, Mark West Creek, F4 Channel, 2000.
- Figure II-19: Average density of 1-3+ aged steelhead, Mark West Creek, F4 Channel, 2000.

### **Lower B2 Channel**

- Figure II-20: Population estimate for steelhead young-of-the-year, averaged by habitat type, Mark West Creek, Lower B2, Channel, 2000.
- Figure II-21: Average number of captured steelhead aged 1-3+, averaged by habitat type, Mark West Creek, Lower B2 Channel, 2000.
- Figure II-22: Average density of young-of-the-year steelhead, Mark West Creek, Lower B2 Channel, 2000.
- Figure II-23: Average density of 1-3+ aged steelhead, Mark West Creek, Lower B2 Channel, 2000.

### **C4 Channel**

- Figure II-24: Population estimate for young-of-the-year steelhead, averaged by habitat type, Mark West Creek, C4 Channel, 2000.
- Figure II-25: Average number of captured steelhead aged 1-3+, averaged by habitat type, Mark West Creek, C4 Channel, 2000.
- Figure II-26: Average density of young-of-the-year steelhead, Mark West Creek, C4 Channel, 2000.
- Figure II-27: Average density of 1-3+ aged steelhead, Mark West Creek, C4 Channel, 2000.

### **Upper B2 Channel**

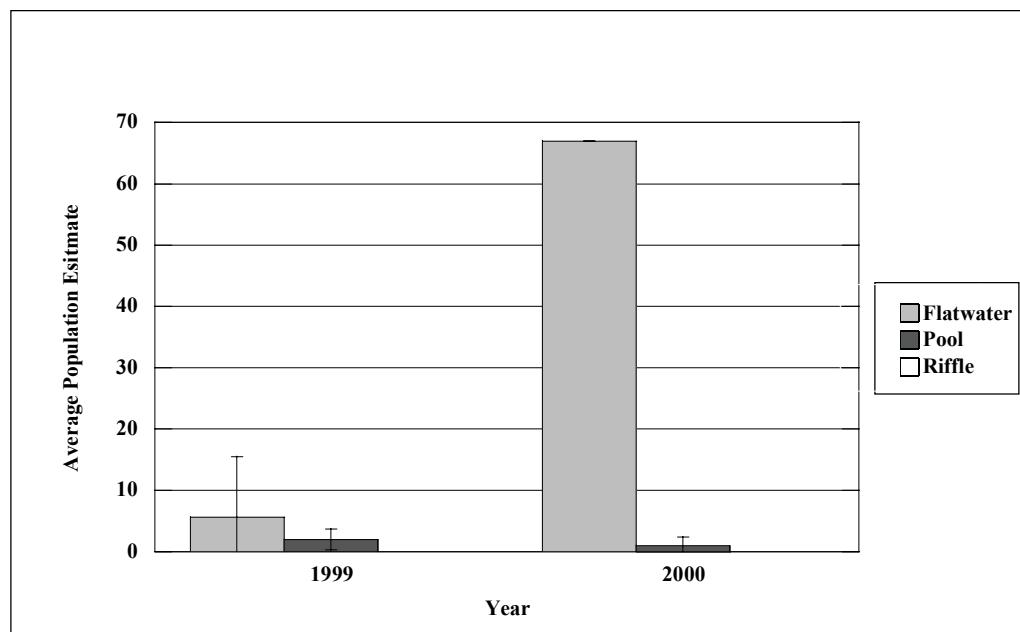
- Figure II-28: Population estimate for young-of-the-year steelhead, averaged by habitat type, Mark West Creek, Upper B2 Channel, 2000.
- Figure II-29: Average number of captured steelhead aged 1-3+, averaged by habitat type, Mark West Creek, Upper B2 Channel, 2000.
- Figure II-30: Average density of young-of-the-year steelhead, Mark West Creek, Upper B2 Channel, 2000.
- Figure II-31: Average density of 1-3+ aged steelhead, Mark West Creek, Upper B2 Channel, 2000.

Table II-1. Steelhead Population Estimate Summary for Santa Rosa, Millington, and Mark West Creeks, 1999-2001

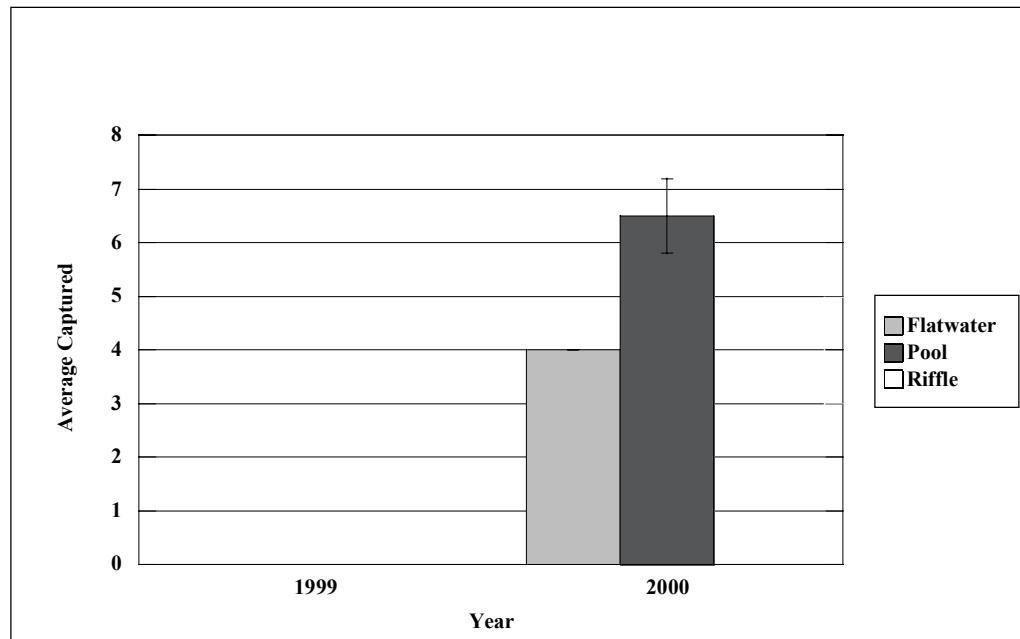
Channel Type	Year	Habitat Type	n	Steelhead Population Estimate (Young-of-the-Year & 1-3+ Age Classes)								
				Avg Length (m)	Avg Area (m2)	Avg YOY Est	SD	Avg YOY Density (fish/m2)	Avg 1-3+ Est	SD	Avg 1-3+ Density (fish/m2)	Total Pop Est
<b>Santa Rosa Creek</b>												
F4	1999	Flatwater	3	45.5	198.8	5.7	9.8	0.03	0.0	0.0	0.00	17.0
F4	2000	Flatwater	1	No data	No data	67.0	n/a	n/a	4.0	n/a	n/a	71.0
F4	1999	Pool	3	54.1	307.6	2.0	1.7	0.01	0.0	0.0	0.00	6.0
F4	2000	Pool	2	No data	No data	1.0	1.4	n/a	6.5	0.7	n/a	15.0
F4	1999	Riffle	2	14.5	59.3	0.0	0.0	0.00	0.0	0.0	0.00	0.0
F4	2000	Riffle	1	No data	No data	0.0	n/a	n/a	0.0	n/a	n/a	0.0
C4	1999	Flatwater	6	20.2	94.2	11.5	6.7	0.12	0.0	0.0	0.00	69.0
C4	2000	Flatwater	8	No data	No data	19.0	19.6	n/a	2.9	4.4	n/a	175.0
C4	2001	Flatwater	2	24.5	64.8	9.0	1.4	0.14	2.0	2.8	0.03	22.0
C4	1999	Pool	8	31.7	212.8	27.3	11.5	0.13	2.6	2.6	0.01	239.0
C4	2000	Pool	9	No data	No data	9.3	22.1	n/a	1.8	6.4	n/a	100.0
C4	2001	Pool	7	24.5	114.6	7.0	7.1	0.06	0.9	1.5	0.01	55.0
C4	1999	Riffle	7	9.3	38.8	5.7	4.4	0.15	0.3	0.5	0.01	42.0
C4	2000	Riffle	9	No data	No data	9.9	6.4	n/a	0.7	1.0	n/a	95.0
C4	2001	Riffle	7	11.6	23.7	1.9	1.3	0.08	0.3	0.8	0.01	15.0
B2	1999	Flatwater	6	14.5	32.0	17.3	12.7	0.54	0.7	0.8	0.02	108.0
B2	2000	Flatwater	7	No data	No data	26.4	20.5	n/a	0.7	1.5	n/a	190.0
B2	2001	Flatwater	1	14.6	58.0	27.0	n/a	0.47	0.0	n/a	0.00	27.0
B2	1999	Pool	16	19.6	80.8	28.1	14.2	0.35	8.3	4.5	0.10	581.0
B2	2000	Pool	17	No data	No data	39.1	23.9	n/a	14.2	9.0	n/a	907.0
B2	2001	Pool	8	29.4	117.9	34.1	15.7	0.29	12.3	5.5	0.10	371.0
B2	1999	Riffle	8	12.6	22.6	14.9	18.4	0.66	0.3	0.5	0.01	121.0
B2	2000	Riffle	8	No data	No data	31.5	26.9	n/a	1.4	1.3	n/a	263.0
B2	2001	Riffle	7	20.2	40.3	14.9	7.3	0.37	0.0	0.0	0.00	104.0

**Table II-1. Steelhead Population Estimate Summary for Santa Rosa, Millington, and Mark West Creeks, 1999-2001 (Continued)**

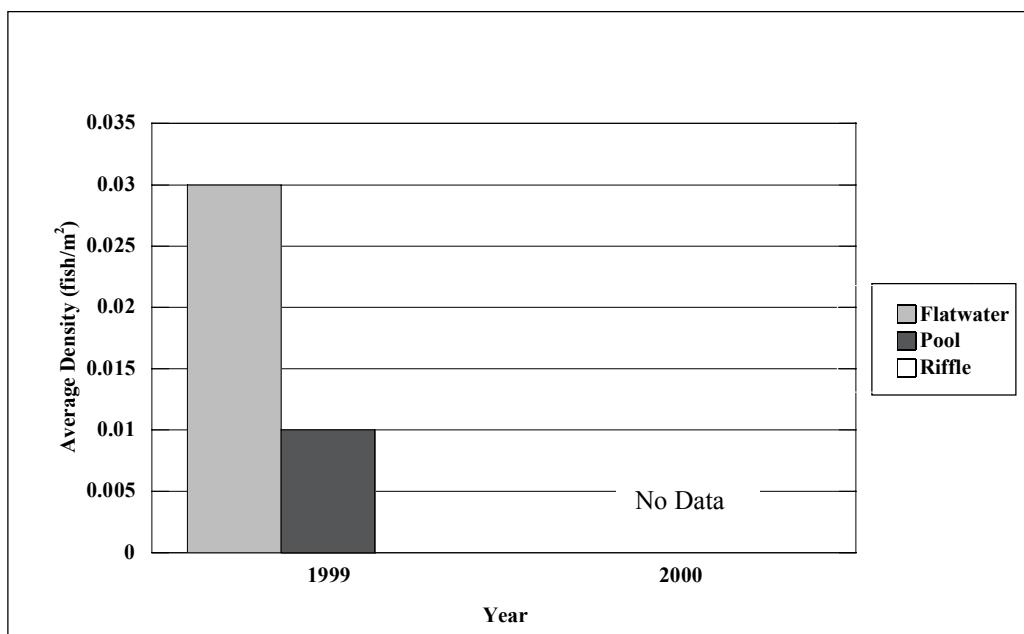
Channel Type	Year	Habitat Type	n	Steelhead Population Estimate (Young-of-the-Year & 1-3+ Age Classes)								
				Avg Length (m)	Avg Area (m2)	Avg YOY Est	SD	Avg YOY Density (fish/m2)	Avg 1-3+ Est	SD	Avg 1-3+ Density (fish/m2)	Total Pop Est
<b>Millington Creek</b>												
F2b/B2	1999	Flatwater	2	7.5	8.4	8.0	0.0	0.95	2.0	1.4	0.24	20.0
F2b/B2	2000	Flatwater	5	9.4	22.2	27.0	21.8	1.22	1.2	1.8	0.05	141.0
F2b/B2	2001	Flatwater	3	12.1	22.8	5.7	9.0	0.25	1.3	1.5	0.06	21.0
F2b/B2	1999	Pool	5	9.3	29.1	15.8	9.4	0.54	5.2	4.3	0.18	105.0
F2b/B2	2000	Pool	7	9.2	31.9	31.7	13.2	0.99	6.4	1.3	0.20	267.0
F2b/B2	2001	Pool	7	9.2	12.7	13.4	9.8	1.06	4.3	3.5	0.34	124.0
F2b/B2	1999	Riffle	5	3.2	5.5	3.2	1.4	0.58	0.4	1.4	0.07	18.0
F2b/B2	2000	Riffle	4	6.8	11.7	13.8	11.6	1.18	1.3	1.5	0.11	60.0
F2b/B2	2001	Riffle	5	9.1	13.5	4.4	2.4	0.33	0.6	0.5	0.04	25.0
<b>Mark West Creek</b>												
F4	2000	Flatwater	7	30.8	169.1	1.0	1.5	0.01	0.4	0.5	0.00	10.0
F4	2000	Pool	6	33.3	162.2	1.0	1.7	0.01	2.0	3.3	0.01	18.0
F4	2000	Riffle	2	12.2	47.2	0.0	0.0	0.00	0.0	0.0	0.00	0.0
Lower B2	2000	Flatwater	3	10.5	57.8	26.7	9.7	0.46	0.3	0.6	0.01	81.0
Lower B2	2000	Pool	10	14.7	81.2	21.4	15.0	0.26	4.7	3.2	0.06	261.0
Lower B2	2000	Riffle	6	6.3	18.4	7.0	6.4	0.38	0.7	0.8	0.04	46.0
C4	2000	Flatwater	3	7.6	31.3	4.3	4.5	0.14	0.7	0.6	0.02	15.0
C4	2000	Pool	10	32.2	193.8	37.5	17.2	0.19	12.8	3	0.07	503.0
C4	2000	Riffle	4	15.9	52.8	14.5	9.8	0.27	0.0	0.0	0.00	58.0
Upper B2	2000	Flatwater	2	12.2	39.1	33.5	6.4	0.86	3.0	2.8	0.08	73.0
Upper B2	2000	Pool	11	11.6	38.4	46.4	30.2	1.21	11.5	7.0	0.30	636.0
Upper B2	2000	Riffle	6	12.0	38.8	27.7	28.2	0.71	1.0	2.0	0.03	172.0



**Figure II-1. Population estimate for young-of-the-year steelhead, averaged by habitat type, Santa Rosa Creek, F4 Channel, 1999-2000.**



**Figure II-2. Average number of captured steelhead aged 1-3+, averaged by habitat type, Santa Rosa Creek, F4 Channel, 1999-2000.**



**Figure II-3. Average density of young-of-the-year steelhead, Santa Rosa Creek, F4 Channel, 1999-2000.**